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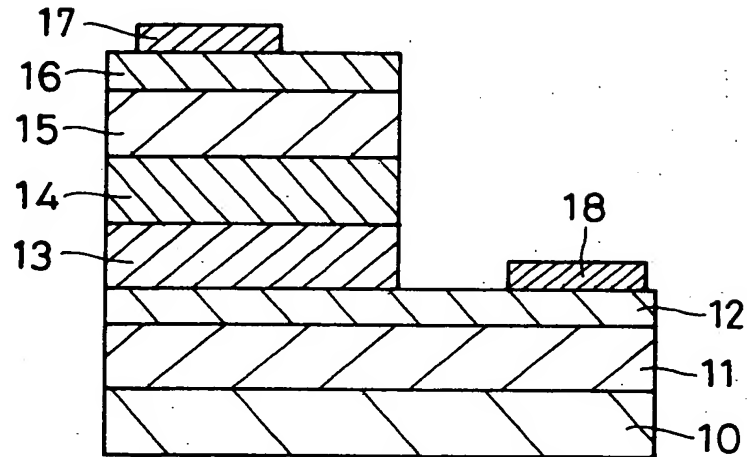
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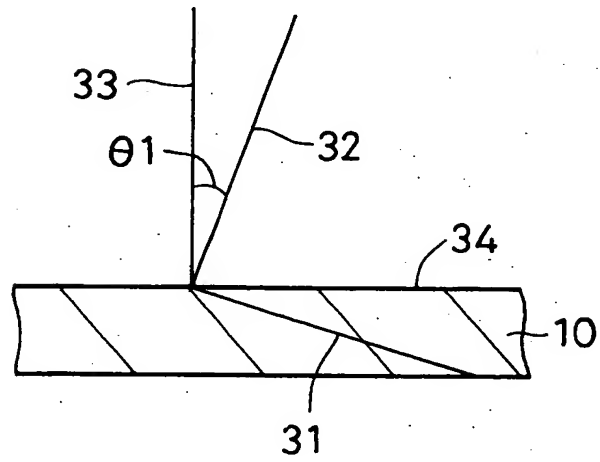
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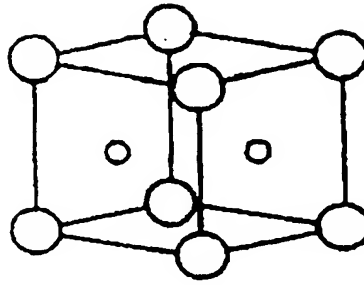
**FIG. 1**



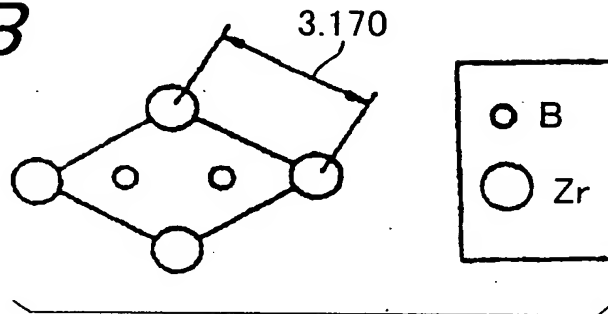
**FIG. 2**



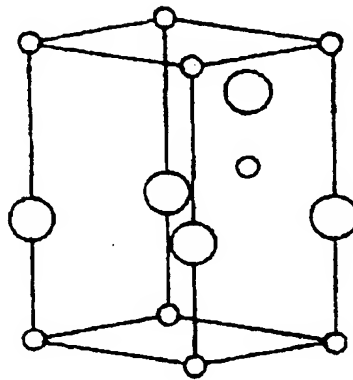
**FIG.3A**



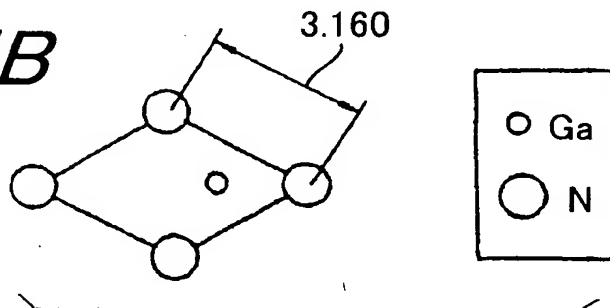
**FIG.3B**



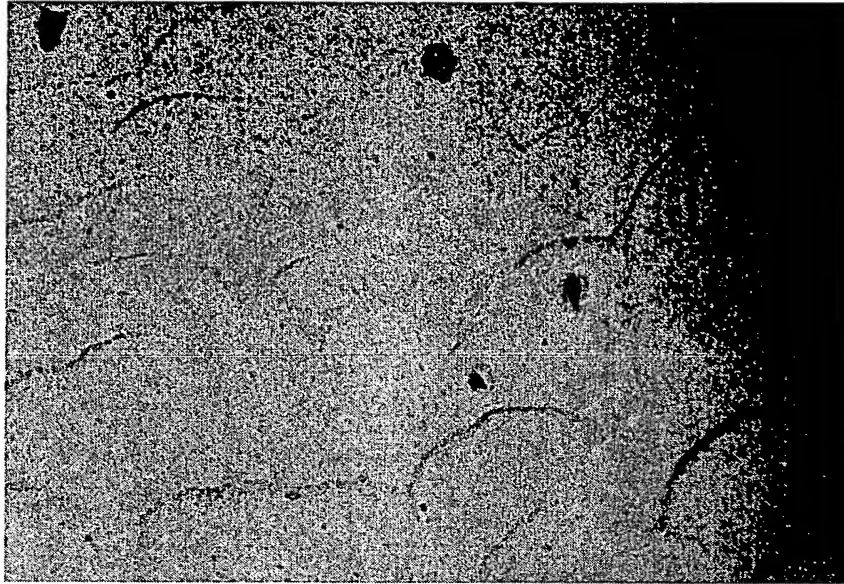
**FIG.4A**



**FIG.4B**

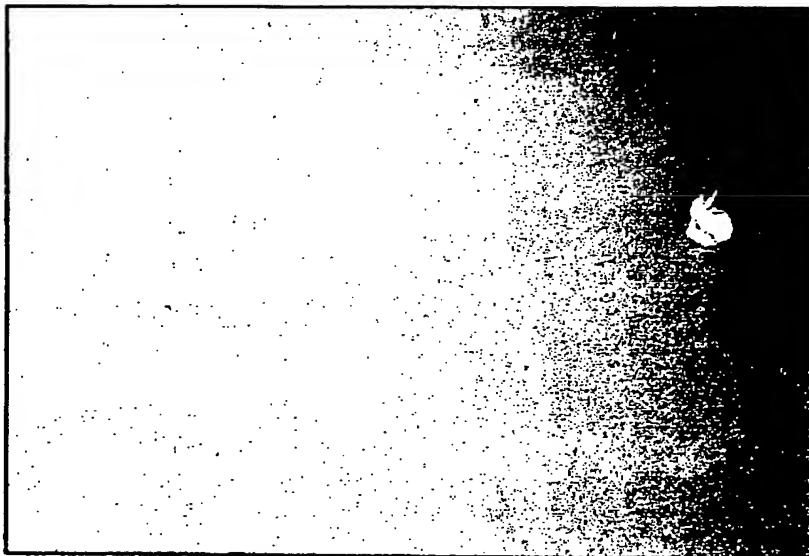


**FIG. 5**



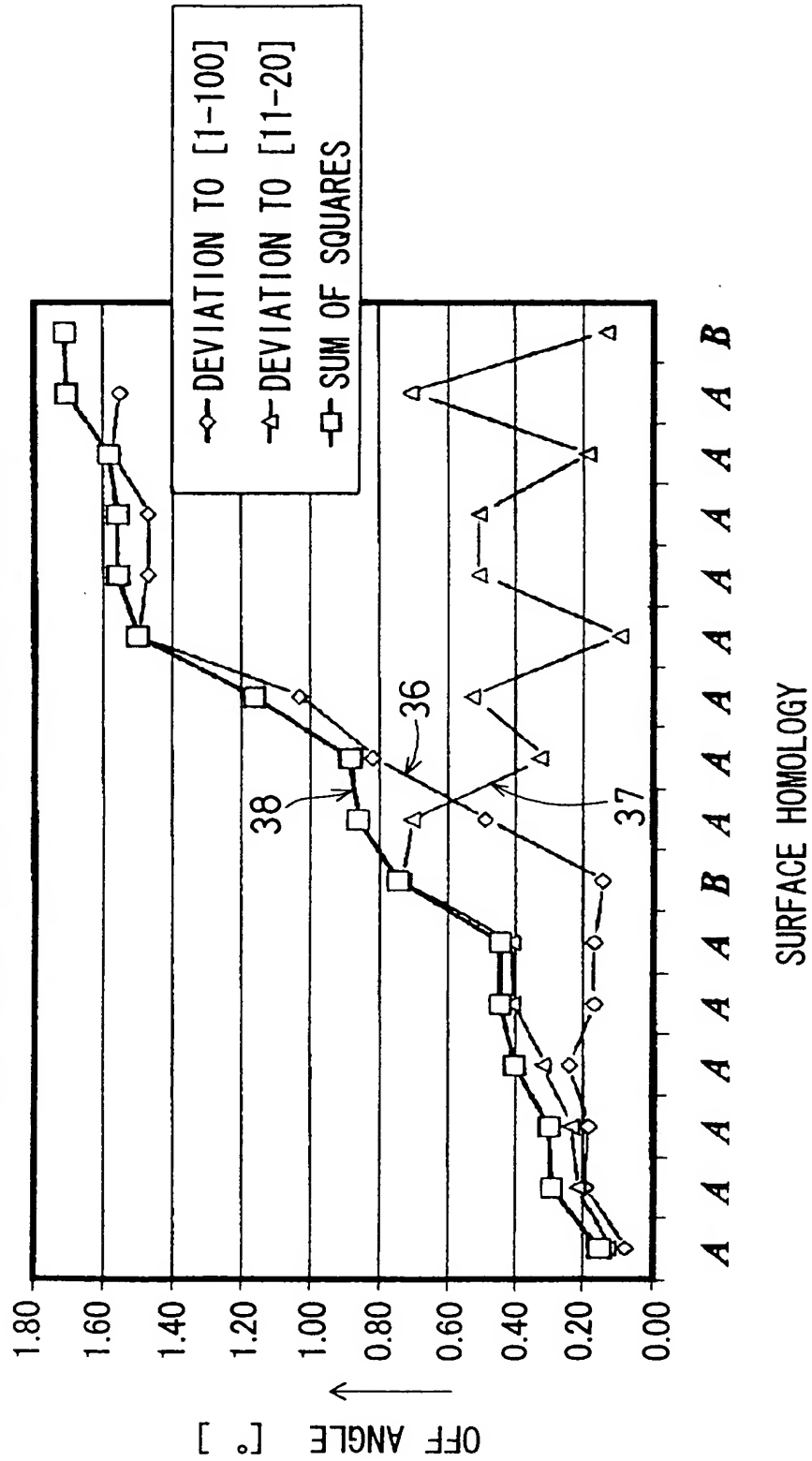
SURFACE STATE B ( $250\ \mu\text{m} \times 190\ \mu\text{m}$ )

**FIG. 6**

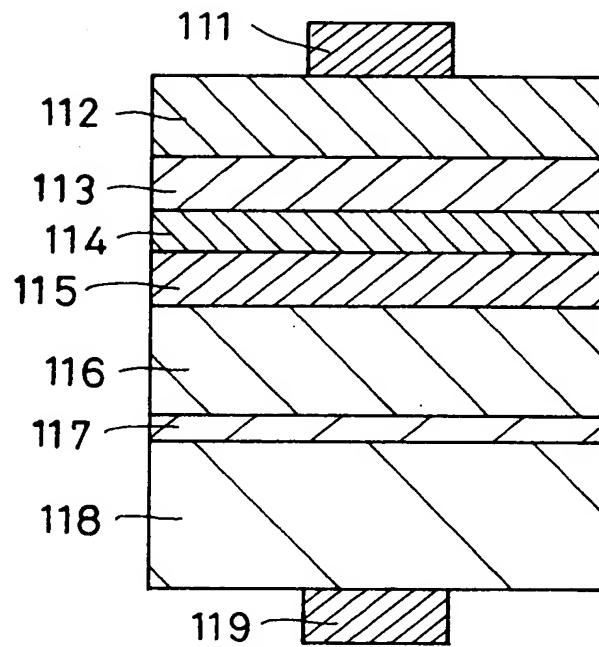


SURFACE STATE A ( $250\ \mu\text{m} \times 190\ \mu\text{m}$ )

# OFF ANGLE BETWEEN NORMAL LINE ON SURFACE OF $ZrB_2$ BOARD AND $[0001]$ AXIS, AND SURFACE HOMOLOGY

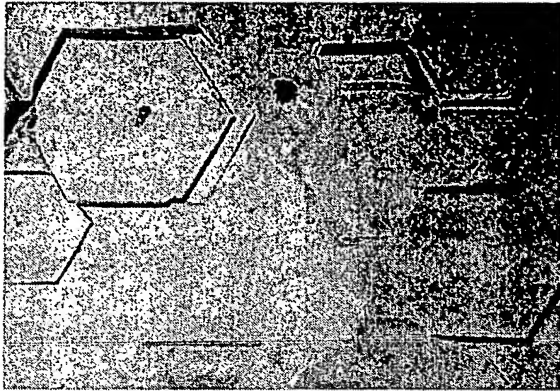


**FIG. 8**



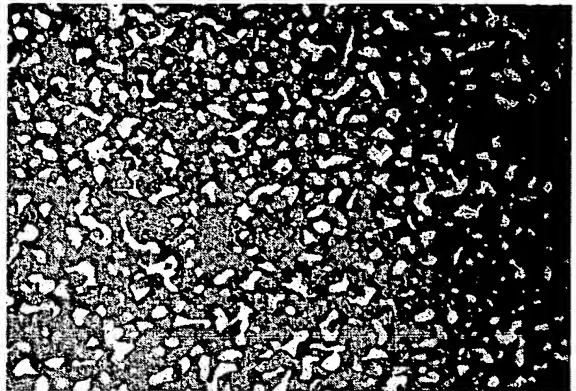
**FIG. 9**

(5)



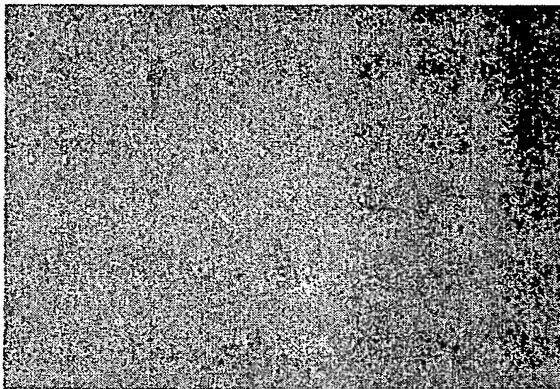
1100°C OR MORE 0.25 873 SECONDS

(1)



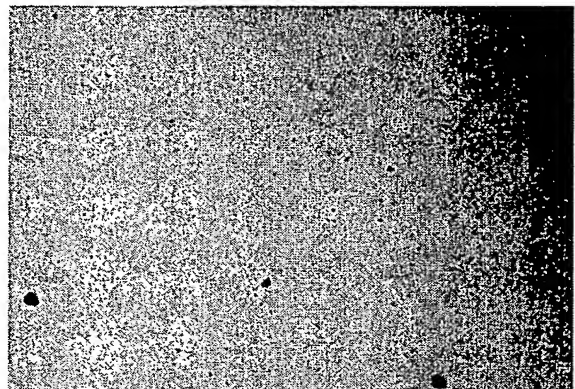
400°C 0.8 —

(2)



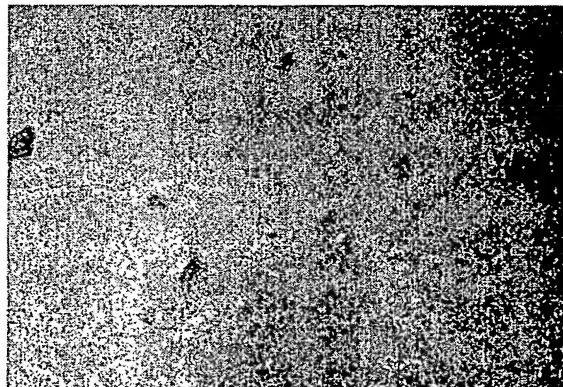
725°C 0.6 760 SECONDS

(3)



850°C 0.5 596 SECONDS

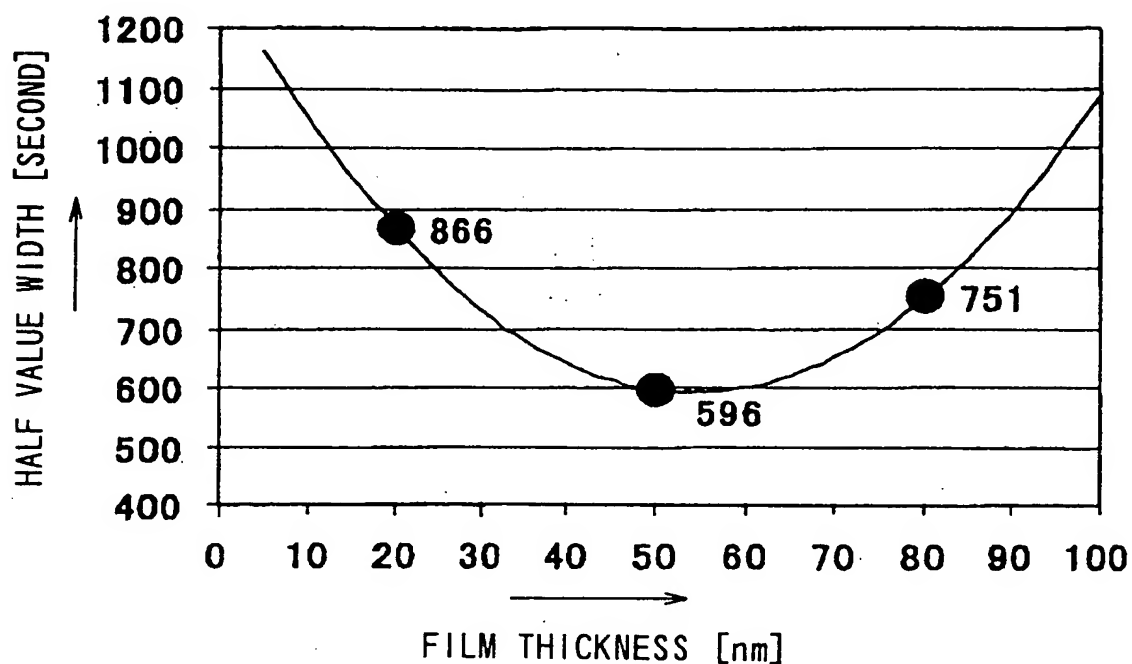
(4)



925°C 0.4 —

**FIG. 10**

RELATION BETWEEN FILM THICKNESS OF  
 $(\text{AlN})_x(\text{GaN})_{1-x}$  AND X-RAY HALF VALUE WIDTH



**FIG. 11**

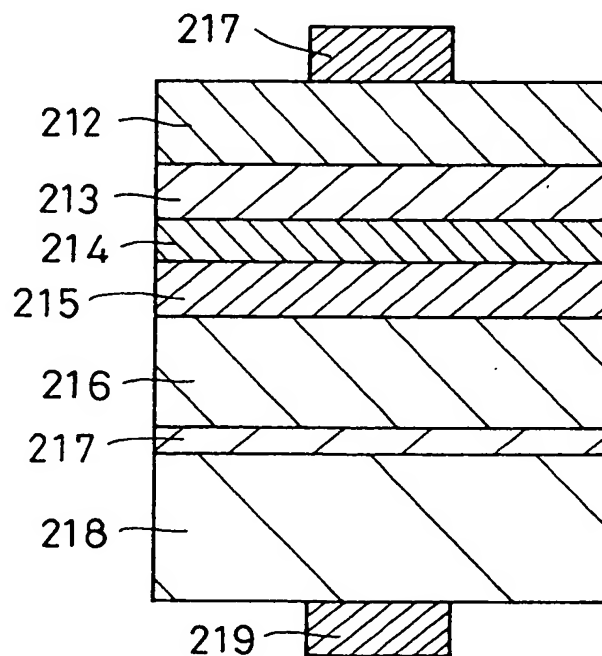
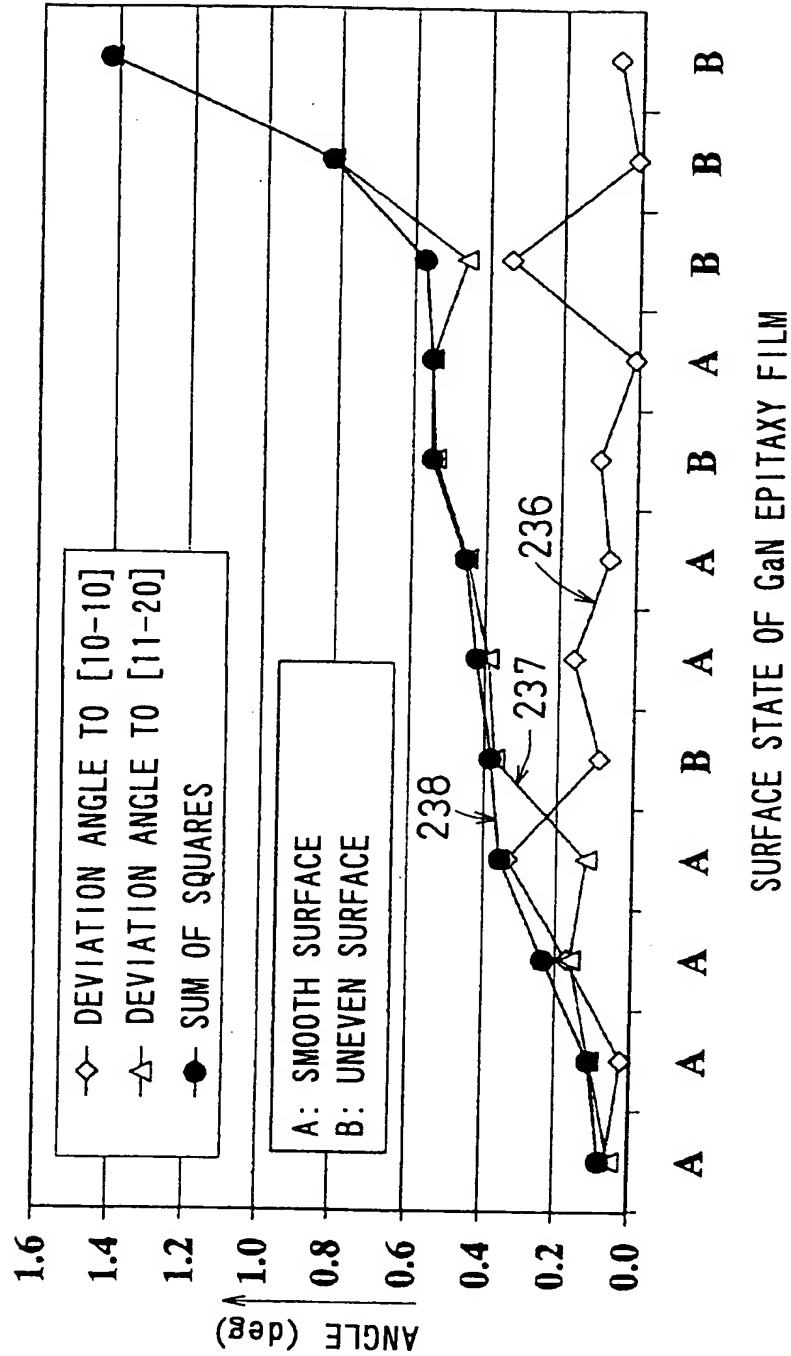


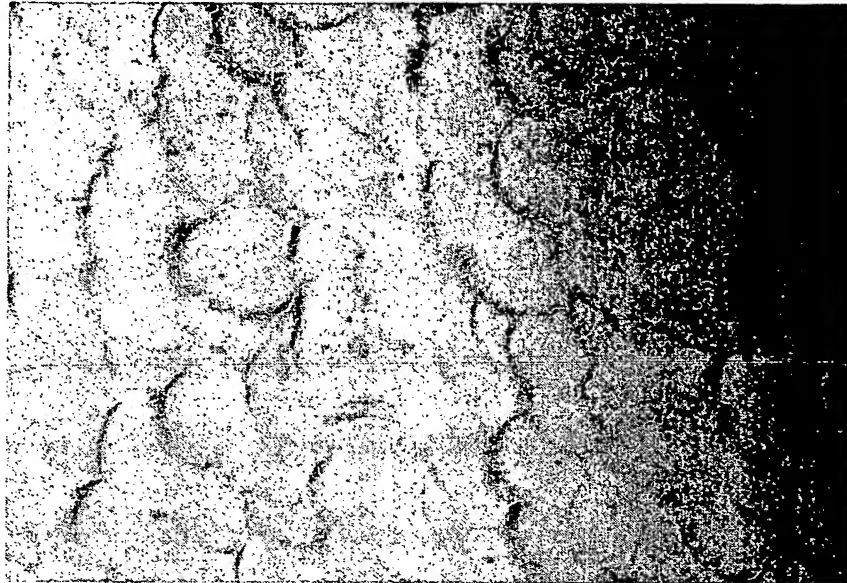


FIG. 12

RELATION BETWEEN OFF ANGLE OF NORMAL LINE OF SURFACE OF  $ZrB_2$  BOARD  
 FROM [0001] CRYSTAL AXIS AND SURFACE STATE OF GaN EPITAXY FILM

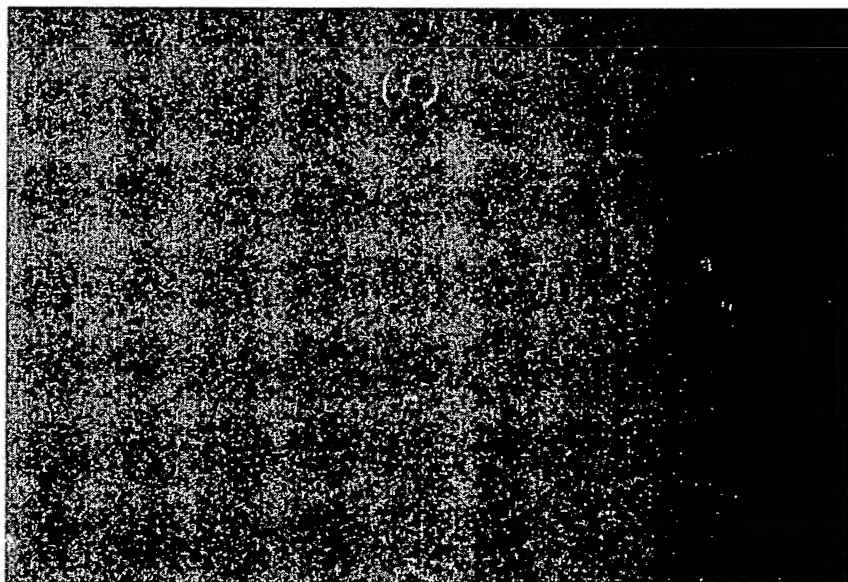


*FIG. 13*



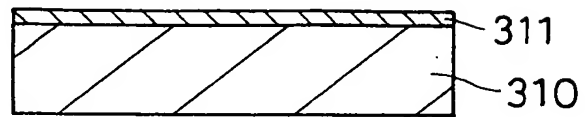
SURFACE STATE B ( $250\ \mu\text{m} \times 190\ \mu\text{m}$ )

*FIG. 14*

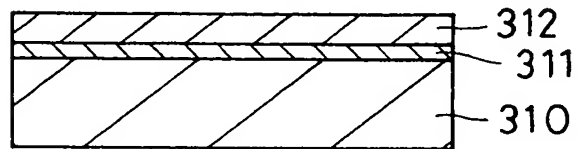


SURFACE STATE A ( $250\ \mu\text{m} \times 190\ \mu\text{m}$ )

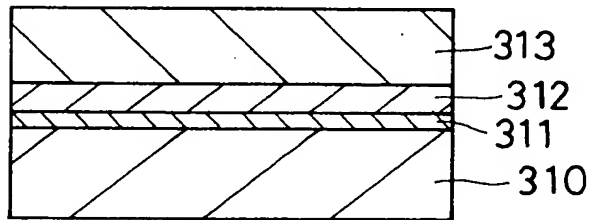
**FIG. 15A**



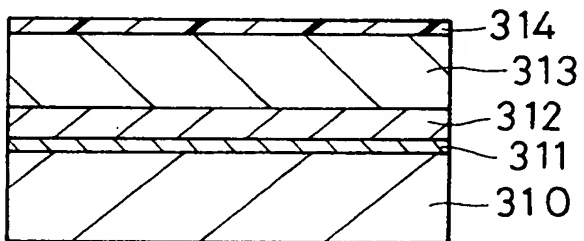
**FIG. 15B**



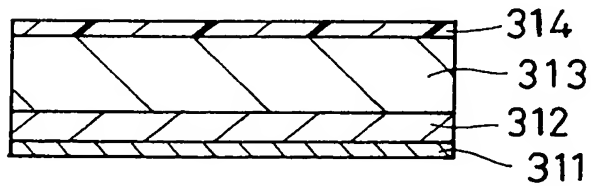
**FIG. 15C**



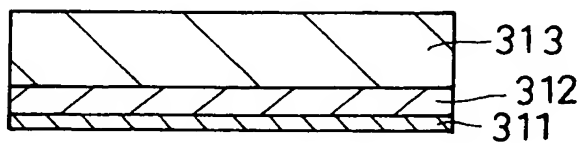
**FIG. 15D**



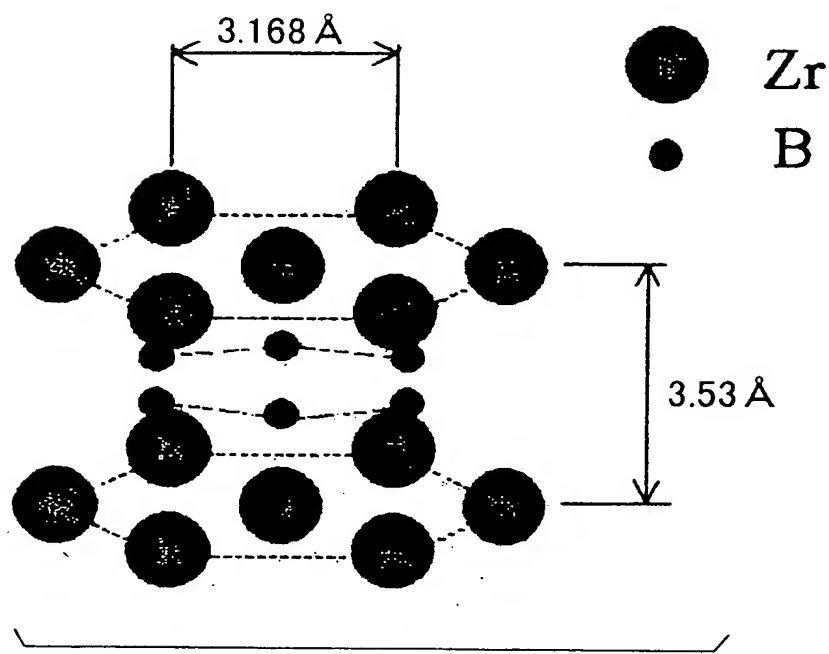
**FIG. 15E**



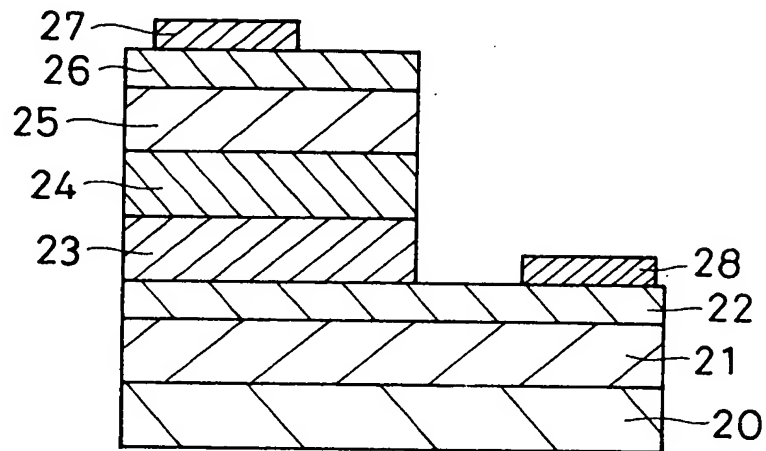
**FIG. 15F**



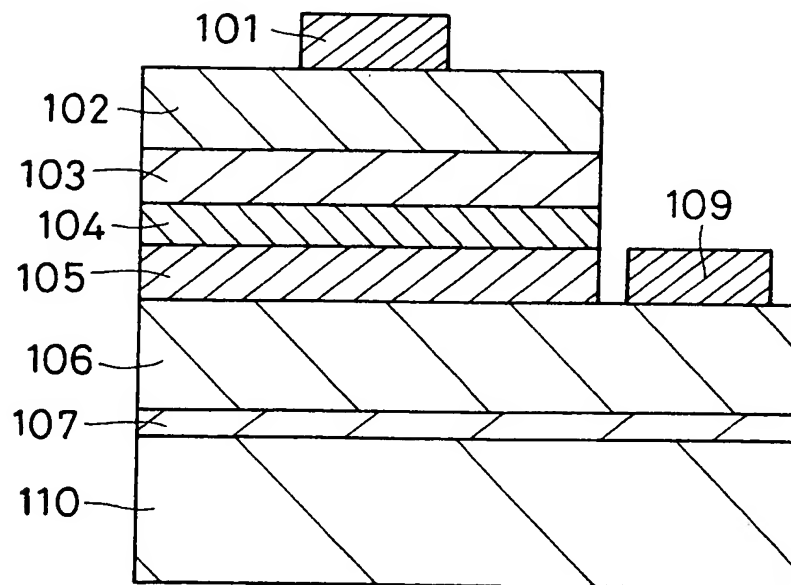
*FIG. 16*



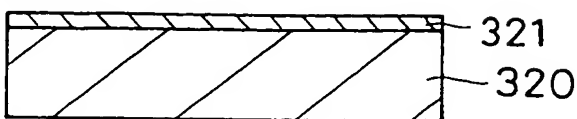
**FIG. 17 PRIOR ART**



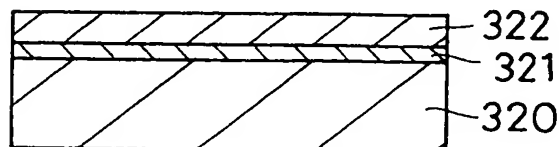
**FIG. 18 PRIOR ART**



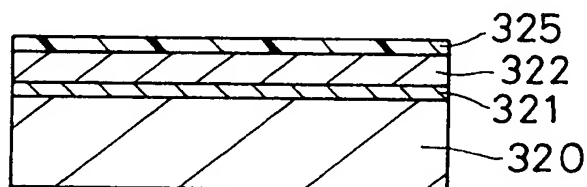
*FIG. 19A*  
*PRIOR ART*



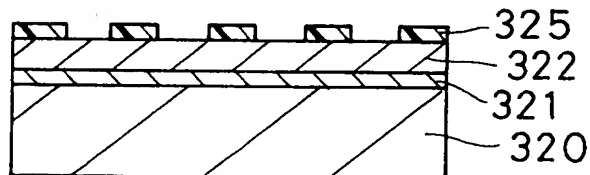
*FIG. 19B*  
*PRIOR ART*



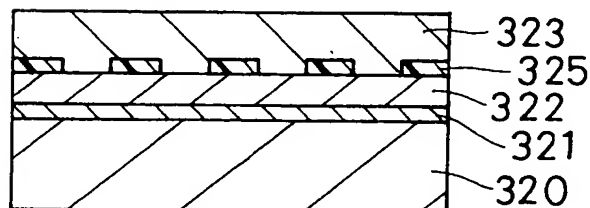
*FIG. 19C*  
*PRIOR ART*



*FIG. 19D*  
*PRIOR ART*



*FIG. 19E*  
*PRIOR ART*



*FIG. 19F*  
*PRIOR ART*

